fittings to: 1) additional tubing that connected to a type 320 carbon dioxide regulator atop a compressed carbon dioxide tank; and 2) an exhaust port to permit venting of gas from the cell. The tubing was connected so that gas entered the cell from the bottom and passed through the steel wool and carbon foam samples before exiting the top of the cell.

The following furnace profile was used:

Heat at 2° C per minute from ambient up to 900° C;

Hold at 900° C for 2 and 6 hours for each of two experiments; and

Turn furnace power off and cool to ambient (uncontrolled rate).

Carbon dioxide, after an initial 10 cubic feet per minute purge, was passed through the reactor at 4-5 cubic feet per minute for the duration of each experiment. In both experiments, two foam samples were loaded in the activation cell. In the two hour test, a "green" foam sample was included in plae of a calcined sample. This sample was expected to lose about 15% of its mass during the process as it calcined, plus whatever activation losses occurred. Mass losses and dimensional changes are reported in Table 1 below.

Table 1

Experiment	Time at 900° C	Initial Mass(g)	Final Mass(g)	MassLoss(%)
1, Calcined	2 hours	18.03	17.24	4.3
1, "Green"	6 hours	13.97	11.2	20.4
2,calcined	6 hours	21.18	18.17	14.2
2,calcined	6 hours	21.38	18.95	11.4

All samples had an initial overall surface area of between 1 m^2/g and 2 m^2/g and a final overall surface area of between 15 m^2/g and 20 m^2/g.

As will be apparent to the skilled artisan, either before or after activation as described herein, the carbon foam structures of the present invention may be fabricated into any appropriate shape for the production of carbon filter elements. The fabricability by sawing, machining or otherwise of the coal-based carbon foams from which the activated foam is produced allows the production of monolithic filter elements of virtually any desired shape.

As the invention has been described, it will be apparent to those skilled in the art that the same may be varied in many ways without departing from the spirit and scope of the invention. Any and all such modifications are intended to be included within the scope of the appended claims.